REMARKS

The application has been carefully reviewed in light of the Office Action dated July 2, 2003. Applicant gratefully acknowledges the Examiner's statement that claims 8-12, 15, 16, 19-21, 30-34, 37, 38, 41-43, 47, 48 and 51-53 contain allowable subject matter. Claims 23 and 26 have been amended. Claim 24 has been canceled. Claims 1, 4-23 and 25-58 are now pending in this case.

Claims 1, 4-7, 13, 14, 17, 18, 22-29, 35, 36, 39, 40, 44-46, 49, 50 and 54-58 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Leung (U.S. Patent No. 6,504,780). Applicant respectfully traverses the rejection and requests reconsideration.

The Advisory Action dated September 24, 2003 acknowledges that the Leung reference, upon which the outstanding rejection under 35 U.S.C. § 102(e) is based, does not recite the parent reference (i.e., U.S. Patent No. 5,999,474) (the "'474 patent") material verbatim. More to the point, however, since the rejection is based on Leung, and since Leung is a CIP of U.S. Patent No. 6,415,353 (the "'353 patent"), which is in turn a CIP of the '474 patent, is the fact that neither the '474 patent nor the '353 patent discloses the subject matter of Leung relied upon by the Examiner in the rejection.

For example, the Office Action dated January 27, 2003 cites a clock division scheme of Leung as anticipating claims 1 and 55. In support of the rejection, the Office Action specifically points to Leung at Figures 4 and 6; lines 10-13 of the Abstract; column 15, lines 17-26; column 8, line 26 – column 10, line 10; column 13, line 31 – column 14, line 53; and column 11, line 62 – column 12, line 3. Neither the '353 patent nor the '474 patent discloses the above-cited subject matter. In fact, the first time the above-mentioned material appears is in Leung, which was filed more than eight months later than the present application. At least for these reasons, Applicant respectfully submits that Leung cannot be properly cited as prior art to the present application.

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The Advisory Action appears to state that the '474 patent discloses the claimed subject matter; however, the Office Action fails to apply the '474 patent to the actual language of the rejected claims. Nonetheless, in order to advance prosecution of this application, herein below, the rejected claims are distinguished from the '474 patent.

Claim 1 and amended claim 23 recite a method for refreshing memory cells comprising "determin[ing] that a data access command has been applied to a command/address bus <u>at a first predetermined time slot</u>." [Emphasis added.] Claims 1 and 23 also recite "initiat[ing] [a] refresh during a time period <u>between said first predetermined time slot and a second predetermined time slot</u> without delaying said data access." [Emphasis added.]

The '474 patent, to the contrary, fails to teach or suggest that data access commands be applied to a command/address bus at a first predetermined time slot, much less that refresh be initiated during a time period between the first predetermined time slot and a second predetermined time slot. Rather, the '474 patent discloses that the control circuit is configured to enable the memory cells to be <u>randomly accessed</u>. '474 patent at claim 1. In order to achieve such random access without interfering with such access to perform a refresh, the '474 patent also discloses a multi-bank DRAM memory and an SRAM cache that stores the most recently accessed data, whereby each of the DRAM banks is operated with independent control, thereby enabling parallel refresh operations and read-write access to different banks. '474 patent at Abstract. The '474 patent <u>makes no mention</u> of applying data access commands to the command/address bus at <u>predetermined time slots</u>.

While the inventions respectively defined by claims 1 and 23 and the '474 patent conduct refresh operations without interfering with external memory accesses, as demonstrated above, the '474 patent achieves this result through methods <u>very different</u>

from those defined by claims 1 and 23. Accordingly, claims 1 and 23 are allowable over the '474 patent.

Claims 13, 35 and 45 each recite a system for refreshing memory cells of a DRAM comprising "a communication link <u>for delivering data access commands to said DRAM on predetermined time slots</u>." [Emphasis added.] At least for the reasons mentioned above in connection with claims 1 and 23, claims 13, 35 and 45 are also allowable over the '474 patent.

Claims 4-7, 14, 17, 18, 22, 25-29, 36, 39, 40, 44, 46, 49, 50 and 54-58 depend from claims 1, 13, 23, 35 and 45 and are allowable at least for those reasons mentioned above and also because the '474 patent does not teach or suggest the respective inventive combinations defined by claims 4-7, 14, 17, 18, 22, 25-29, 36, 39, 40, 44, 46, 49, 50 and 54-58.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Dated: October 2, 2003   Respectfully submitted,

By_____

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